

CLAIMS

1. A method of manufacturing a white light emitting diode (LED) device using a liquid epoxy resin, comprising:

5 mixing a main gradient with a curing agent at room temperature to obtain the liquid epoxy resin;

semi-curing the liquid epoxy resin at 70-100°C under 1-30 torr;

adding a phosphor to the semi-cured liquid epoxy resin at room temperature and mixing the phosphor and the semi-cured liquid epoxy resin to obtain a mother resin mixed
10 with the phosphor;

feeding the obtained product into an element to be molded comprising a LED chip;
and

completely curing the mother resin at 120°C or higher under an ambient pressure.

15 2. The method of claim 1, wherein the feeding the mother resin is performed using a potting method or a screen pattern masking method.

3. The method of claim 1, wherein the main gradient is cresol novolac epoxy, phenol novolac epoxy, bisphenol A epoxy, or a mixture thereof and the curing agent is an
20 acid anhydride, a modified aromatic amine, phenol novolac epoxy, or a mixture thereof.

4. The method of claim 1, wherein a phosphor is further added during the mixing of the main gradient with the curing agent.